Letter from J.A.D. McCurdy, 1908

Important Letter by J A D McCurdy describes Kite Ascent by Selfridge 1908 Dear George:

I have been requested by Miss Tarbell to prepare an article concerning the organization of our Association and the experiments performed during its lifetime. Mr. Bell has suggested that the proper way to go about this is to write a letter describing things in detail with a special idea in view of bringing up before your mind the living pictures of the different experiments about to be described. I have already written an article which Mr. Bell describes as a leaden bullet in a piece of paper, soggy, heavy and without life. So if you can spare a few moments of your valuable time you may, perhaps, by reading over this literary production, get an insight into the affairs of the Aerial Experiment Association.

Casey, Mr. Bell and I arrived here from Washington early in the spring of 1907. It was generally known that a young army officier from West Point had written to Mr. Bell asking if he might come to his laboratory for his summer vacation and learn something about problems relating to Aerial navigation from a practical standpoint, from observing the experiments which were to be performed here during the summer.

Lieut. Thomas E. Selfridge was the name of this young man and, of course, we all wondered very much what sort of a chap he was and how he would fit in with the routine of life here. Mr. Bell was very much pleased that Selfridge should take an interest in the experiments from an army standpoint so wrote him a cordial letter welcoming him to Beinn Bhreagh to be his guest during the summer.

2

The day Selfridge arrived was very wet and cold. As his clothes were very damp when he arrived here he was compelled to make a change. I went up to his room with him sat on the side of his bed and talked while he, with the help of an axe and coal chisel, broke open his trunk explaining to me that some how or other he had lost his keys. Of course I was in

a very critical mood at the time and although he didn't make a big hit at first still Casey and I concluded that, with proper handling, he might be quite an asset.

His appearing in regular Beinn Bhreagh togues the first day was a point scored in his favor. When we got talking about the work he jumped right in from the first and spoke of the things we ought to do. He had acquired quite a lot of book knowledge but appeared a bit hazy on the subject in general from a practical standpoint.

In a few days he was quite one of us and we all felt very much attached to him. He was a jolly fellow, could take a joke well and could handle the billiard cue to perfection.

All through that summer the laboratory was engaged in building a large tetrahedral structure composed of over 3000 cells. This was the largest structure built up to that time. The idea in view was to have enough cells in it so that it would be capable of carrying a man into the air.

To show how well Tom was liked right from the start he was selected as the one to make this first ascension. It took what seemed an awful long time to get everything ready for a rrial. In the first place what we called the Ugly Duckling had to be remodeled. This was a catarmaran raft on the platform of which we mounted four long arms running fore and aft 3 pivoted at a point about one quarter of the distance back.

It was so arranged that when tilted up in front the kite which was floating on the water could be drawn over the lower end of the arms and by hauling upon down in front again the kite would be lifted completely out of the water and safely stowed on the deck of the Ugly Duckling.

Now in releasing the kite for a flight the arms would be slightly tilted up in front so that the wind could act on the under side of the kite surfaces when — up she would go.

We assumed that with the big kite it would require a wind of from 25 to 30 miles an hour and as such wind seldomblew on these lakes the breeze had to be supplemented by the help of the steamer Blue Hill. The Duckling was towed by a long line about 300 feet directly astern of the steamboat and the flying line of the Cygnet ran from the kite on the Ungly Duckling to the upper deck of the Blue Hill.

It was on Dec. 6 when finally everything was ready and it was indeed a child day. Tom dressed himself in as clothing as possible wearing over his head a Siberian hood which was presented to him by Mr. Kennan, a light pair of rubver sneakers and long overstockings coming well up to his hips; a light oilskin jacket completed his outfit.

The center of the Cygnet was hollow from fore to aft forming a space which we called the man-hole. Tom lay down full length on his stomach in this man-hole with his head coming to about the front edge of the kite. There was great excitement all over the town. A few special visitors 4 had been invited to be on board the Blue Hill and, of course, the whole family were there with their cameras, etc.

The flotilla started off of Long Sand Point and headed directly up the Bay, rounded Beinn Bhreagh head, steamed out into the middle of the lake. The wind was blowing from the NW in puffy squalls. When we were out far enough we came about and headed directly into the wind coming going full speed.

Tom had on board the Cygnet with him a bamboo pole with a white flag on one end. It was agreed that when he was ready to let go he should wave this flag and that Mr. Bedwin from the upper deck of the Blue Hill, where the flying line was attached, would give the signal to let go. It was further agreed that when Selfridge wished to come down he would signal with his flag poking it out from the man-hole and waving it so it could be seen.

Mr. Bell, with the great medicine chief Dr. McDonald, was stationed in the motor-boat Gauldrie with a tow row -boat in tow so they could be on the spot the moment the Cygnet landed.

Finally the signal was given to the men on the Ugly Duckling to release; and almost before we knew it away soared the kite to an altitude which we figured out later was 168 feet. Well Sir, the excitement from the top deck of the Blue Hill was something fierce. There was old Sam Campbell waving his bonnet and cherring like a madman. The Captain in his excitement blew the whistle half a dozen times and I feel sure that if there had not been so much noise we would have heard the snap of about a dozen cameras.

The fireman down in the boiler room realizing that we must get as much speed as possible shovelled on a whole 5 batch of coal causing dense black smoke to pour profusely from her funnels. It was just at this moment that the wind slackened and the dense smoke completely obscured the Cygnet from our view.

It had been arranged that if necessity demanded the flying line could be instantly released by one clip of an axe and in fact a man had been specially detailed to have the axe always in his possession. First thing we knew, however, was when the smoke lifted and there in the water was the Cygnet being towed at terrific speed, with water boiling up all around her. When the order was given to chop the rope it was too late. The resistance of the water had been too much for the frail construction and she was broken into a hundred pieces. Selfridge explained to us later that he himself was unaware that B the kite was coming down so gently did she descend and owing to the arrangement of surfaces his view of the water beneath him was cut off. Hence, although he was prepared, he did not release the flying line from the kite.

Mr. Bell and the Gauldrie were seen hurrying to the scene. The Captain stopped the Blue Hill and we all rushed down stairs to the side of the steamer to which the Gauldrie was making evidently with Selfridge on board. Sure enough, there he was his whole

face covered with one big smile, water dripping from him in pools. Willing and excited hands bundled him over the side where he was immediately taken to the ladies cabin for a rub-down. Casey and I acted as trainers, striped off his clothes and lying him down on one of the cabin seats, spanked him all over until his blood rushed through the skin. Mr. Kennan in the excitement of the moment removed his own 6 trousers and offered them to Selfridge which offer, however, Selfridge politely refused. By the time we reached the Point everybody was feeling fine and telegraphic dispatches were sent out all over the country. No regret was felt at all concerning the fate of the Cygnet. The experiment was a success in that it proved that a tetrahedral structure could be built which would carry not only itself, but a man into the air.

Every afternoon when work was over at the laboratory we gathered around the big fireplace at Dr. Bell's home where the events of the day were discussed over a cup of afternoon tea. Here the whole family gathered — Mrs. Bell, grandchildren and all and it was always one of the most delightful moments of the day.

On one afternoon early in September we had come hom from the laboratory and were receiving our tea from Mrs. Bell who presided over the small teatable when she announced that if we would give her our undivided attention for a few moments she would like to tell us of a brilliant idea she had conceived some time ago and which, with Mr. Bell's permission, she would like to bring before the meeting. We were all, of course, attention at once and Mrs. Bell quietly reviewed the circumstances which led to the formation of the Volta Association many years ago by Mr. Bell.

He had at that time, she explained, associated with himself, two other gentlemen who were more or less congenial in thought, with the idea in view of producing a talking machine and so the graphophone of today was evolved. Mrs. Bell went on to say that here was a similar condition of affairs — Mr. Bell surrounded by younger men who were very 7 much interested in the subject over which he labored and she wished to propose that the

Volta Association idea by carried out here. That an Association should be formed which she generously offered to finance, having as their aim “To get into the air”.

We were all, of course, very much delighted with the idea and Mr. Bell enthusiastically set to work to formulate papers for the organization of the proposed association which were later drawn up and signed in the presense of witnesses at Halifax, Nova Scotia; and so on October 1, 1907 the Aerial Experiment Association was born. X

At the conclusion of experiments with the Cugnet the season was so far advanced that we decided to move our headquarters to Hammondsport, New York, where the motor cycle works of Mr. Curtiss were established. Selfridge's experience in the Cygnet had fired us all and we longed to build a machine which would glide in the air free from any attachment to Mother Earth.

The machine which we constructed preferred to build is properly popularly known as a glider and from the information given the world by the German engineer Lilienthal, the Wright Bros. and Dr. Chanute of Chicago it was not very difficult to design such a machine.

The goider which we constructed was a simple arrangement of two surfaces one above the other spaced 6 feet apart. It was about 20 feet long and about 6 feet deep. At the center of the bottom surface was a hole which would allow a man's body to pass through. A hill having a fair slope was selected from which our experiments could be performed. The glider was carried to the top of this hill and four men were detailed to hold on to each of the four corners. You take your 8 position in the center of themachine with your head and shoulders com?ng up thr?ugh the hole on the bottom surface and hold on tightly to two firm sticks which are secured on either side of you to the front and back edge of the glider.

We had arranged the usual signal of 1,2,3 — go. At the word “go” you and the four men at each corner of the glider rush ed forward to the brink of the hill and you and the glider are glider thrown off into the air. You half expect to be thrown dashed to the ground; but

such is not the case however. You feel for a minute as if you are on air and you are and much after the manner of a toboggan you gently coast down the slope. If you loose your balance for a moment you are capable of getting quite a dump but if the ground is covered with about two feet of snow, as it was in our case, you don't mine that very much.

Many glides were made with this machine by the different members varying in length from 10 feet to a hundred yards. And although I must say not much mathematical data was obtained from these experiments still we had acquired the feeling that every aviator possesses that to glide free in the air is beyond expression by words.

Gliding flight is, of course, limited. It depends upon the length of hillside which is at your command. How much better it would be, we thought, if a motor and aerial propeller could be placed in the glider which would push the machine along through the air for any distance we wished to go and, in fact, convert the simple glider into a flying machine.

This plan was actually followed out although as the additional weight of motor and propeller would require more 9 supporting surface a larger glider was therefore constructed in which the motor and propeller were mounted. It was obvious that we must have rudders to control our direction of flight and, as we were free to go either to the right or left or up and down, two rudders were therefore required. The one to steer to right or left as in the case of an ordinary boat was placed in the rear of the machine and the one to control up or down movement was pivoted about 12 feet out in front of the machine. This was exactly like the rudder in the rear but instead of being in a vertical position was horizontal.

As it would be too uncomfortable for the operator to hang on to the machine and in fact impossibele to work his rudders in such a posture it was deemed advisable to arrange a seat where he could comfortably sit and, if all went well, enjoy himself to his hearts content.

This machine, when completed, was named the “Red Wing” and constituted what is technically knowns as an aerodrome. Two runners were provided like those used in a sleigh and our plan was to cause the machine to advance running over the ice by her own propulsion and, if a sufficient speed could be obtained, the machine must rise offthe ice, due to the air acting on the under surface of the machine as in the case of a kite, and she would fly.

On March 12, then, 1908 the Red Wing was taken from its shed and placed on the ice of Lake Keuka. The towns people gathered from far and near to see the fun and the interest they took in this queer looking bird was evinced by the manner in which they crowded around asking questions, all talking in an excited manner.

10

We thought it best at the time to run the machine slowly over the ice making no attempt to fly but simply to see if our running gear, propeller, controls etc. were all working well. Mr. Baldwin stepped into the operators seat and the engine started. Men held on to the machine while the motor buzzed and the propeller twirled causing such a draft of air as to make you hold tight on to your hat to prevent its being blown away. Soon the order was given to the men to let go and away shot the machine gathering in speed when after travelling a distance of about a hundred feet responded well to the action of her front rudder and rose gently into the air. flying onward over the ice at an elevation of about 12 feet landing again without damage at a point 319 feet distnat.

The crowd who had gathered there to witness simply an experiment were amazed to and cheer after cheer pealed forth and people ran here and there knowing not what they did. There before their very eyes the machine had accomplished a flight whcih was the first ever publicly made in America (The Wright Bros. at that time having conducted their experiments in secrecy).